

**What Is Claimed Is:**

1. A method for recognizing a key in a terminal apparatus having a key matrix structure consisting of a plurality of lines and rows, in which corresponding bits are respectively assigned, the method comprising the steps of:

5        recognizing pushing of and detaching from a key by using a difference between a current key status value on the key matrix and a previous key status value according to a change of the key status, and

10      obtaining a positional value of an inputted key on the key matrix by using a relational expression considering difference values between adjacent rows in each line and between adjacent lines in each row and a difference between the previous key value and the current key value.

15      2. The method of claim 1, wherein the relational expression is  $2^{j+5} + 2^i$  whereby i and j are variants representing the lines and rows of the key matrix.

20      3. The method of claim 1, wherein the pushing of the key is recognized when a value subtracting the previous key status value from the current key status value is a positive number, and the detaching from the key is recognized when a value subtracting the previous key status value from the current key status value is a negative number.

25      4. A method for recognizing a key in a terminal apparatus having a matrix structure, the method comprising the steps of:

      recognizing pushing of and detaching from a key by using a difference between a previous key status value on the key matrix and a current key status value according to a change of the key status;

      calculating variants i and j by using a relation "the current key status value – the previous key status value =  $2^{j+5} + 2^i$ "; and

      obtaining a positional value of an inputted key on the key matrix by means of i and j.

30      5. The method of claim 4, wherein the positional value of the inputted key is key [i][j] whereby "i" represents a position of a line in the key matrix, and "j" represents a

position of a row in the key matrix.

6. A method for recognizing a key in a terminal apparatus having a key matrix structure, comprising the steps of:

5 calculating variants  $i$  and  $j$  by using a relation "a current key status value - a previous key status value =  $2^{j+5} + 2^i$ " between the previous key status value on the key matrix and the current key status value according to a change of the key status; and

10 obtaining a positional value of an inputted key that is key  $[i][j]$  on the key matrix by means of the variants  $i$  and  $j$  whereby " $i$ " represents a position of a line in the key matrix, and " $j$ " represents a position of a row in the key matrix.

7. A method for recognizing a key in a terminal apparatus having a key matrix structure, comprising the steps of:

15 storing a first key status value according to a change of a key status on the key matrix in a first temporary storing unit;

storing a second key status value according to a change of a key status after storing the first key status value in a second temporary storing unit;

recognizing pushing of and detaching from a key on the key matrix by using a difference between the stored first key status value and the second key status value;

20 calculating variants  $i$  and  $j$  by using a relation "the second key status value - the first key status value =  $2^{j+5} + 2^i$ "; and

obtaining a positional value of an inputted key on the key matrix by using the variants  $i$  and  $j$ .

25 8. The method of claim 7, wherein a positional value of an inputted key is  $[i][j]$  whereby " $i$ " represents a position of a line in the key matrix, and " $j$ " represents a position of a row in the key matrix.

30 9. The method of claim 7, further comprising the step of obtaining a positional value of the inputted key, and storing the second key status value in the first temporary storing unit.